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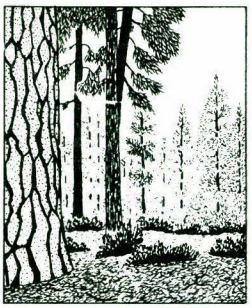

FOREST RESEARCH NOTES

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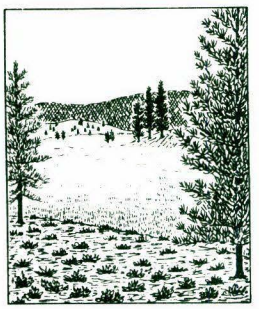

No. 110

JUN 24 1968

August 20, 1956

ROCKY MOUNTAIN STATION

CALIFORNIA CONE CROP--1956

Gilbert H. Schubert, Forester,
Division of Forest Management Research

Prospects are favorable for a good cone crop of most commercial forest trees in California in 1956. Generally the crop was at least light. Medium crops were twice as frequent as light or heavy ones. Of the major species, incense-cedar was the only one which was reported as having no cones throughout most of its range.

These are the main conclusions from a study of cone-crop reports sent to the California Forest and Range Experiment Station by members of the California Division of Forestry, the California Region of the U. S. Forest Service, and the Southern California Edison Company.

The reports were generally based on occular estimates in which the crop was rated as none, very light, light, medium, or heavy according to the cone crop classification used in Oregon 1/. In this classification the cone crop ratings are:

1. None--no cones on any trees or few cones on occasional trees.

2. Very light--few cones on 25 percent of the trees, or few cones on 25 percent of the trees and many cones on occasional trees.

3. Light--few cones on 75 percent of the trees, or many cones on some trees and few cones on 75 percent of the trees.

4. Medium--some cones on all trees, or many cones on less than 75 percent of the trees.

5. Heavy--many cones on 75 percent of the trees and some cones on all trees, or many cones on all trees.

1/ Engstrom, W. H. Oregón cone crop, 1954. Oregon State Board of Forestry. Res. Note 16, 7 pp., 1954.

The California Forest and Range Experiment Station is maintained at Berkeley in cooperation with the University of California.

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Although these ratings are subjective, they provide valuable information for those planning to collect seed this fall.

As an aid to seed collectors, the crop reports have been segregated according to the forest tree seed collection zones described by Fowells 2/. This grouping (table 1), showed that the most promising localities for collecting seed of major commercial conifers--those with medium to heavy or heavy cone crops--were as follows:

	Collection Zone
Douglas-fir	X, XI, XII
Red fir	VI
White fir	VI, VII
Jeffrey pine	IV, VI, X
Ponderosa pine	IV, X, XI
Sugar pine	II, III, IV, VII, XI

A map of the collection zones is appended to this note, but since the seed crop varies widely in most zones, it is also advisable to consult field officers of the California Division of Forestry or the U. S. Forest Service.

2/ Fowells, H. A. Forest tree seed collection zones in California. Calif. Forest and Range Expt. Sta. Res. Note 51, 5 pp., illus. 1946.

Table 1.--Summary of cone crops by species and seed zone, California, 1956

Species	County or Seed Collection Zone	Cone Crop 1/
CEDAR:		
Incense-cedar (Libocedrus decurrens)	I, IV, V, IX, X	None to light
	II, III, VII, VIII	None
DOUGLAS-FIR:		
Bigcone Douglas-fir (Pseudotsuga macrocarpa)	IX	None to very light
Douglas-fir (P. menziesii)	I	Very light to heavy
	II, III	Light to heavy
	IV, V	Medium
	X, XI, XII	Medium to heavy
	XIII	Light to medium
FIR:		
Lowland white fir (Abies grandis)	XI, XII	Light
	XIII	Medium
Red fir (A. magnifica)	I	Very light to medium
	II	Light
	III	Light to medium
	V	Very light to medium
	VI	Heavy
	VII	Very light to heavy
	VIII	Very light to medium
	X	Very light
White fir (A. concolor)	I	Very light to heavy
	II	None to heavy
	III	Light to heavy
	IV, V	Very light to heavy
	VI	Heavy
	VII	Medium to heavy
	VIII	Very light to heavy
	IX	Very light to medium
	X	Light to heavy
PINE:		
Bishop pine (Pinus muricata)	XII	Light
	XIII	Medium
	Monterey	Very light
Coulter pine (P. coulteri)	IX	Very light to medium
	Fresno (Westside)	Very light
	San Benito	Very light

Species	County or Seed Collection Zone	Cone Crop[1/]
PINE: (continued)		
Jeffrey pine (*P. jeffreyi*)	I	None to heavy
	II	Very light to medium
	III	Very light to heavy
	IV	Heavy
	V	Very light to heavy
	VI	Heavy
	VII	Very light to light
	VIII	None to medium
	IX	Very light to medium
	X	Medium to heavy
	Kern (Tehachapi area)	Light
Lodgepole pine (*P. contorta*)	XII	Light
	XIII	Medium to heavy
Monterey pine (*P. radiata*)	XIII	Light
Ponderosa pine (*P. ponderosa*)	I	Very light to heavy
	II, III	Light to heavy
	IV	Medium to heavy
	V	Light to heavy
	IX	Very light to medium
	X, XI	Medium to heavy
	XIII	None
Sugar pine (*P. lambertiana*)	I	Light to heavy
	II, III, IV	Medium to heavy
	V	Light to heavy
	VII	Medium to heavy
	VIII	Very light
	IX	Light to medium
	X	Light to heavy
	XI	Medium to heavy
	XIII	Medium
Torrey pine (*P. torreyana*)	IX	None
SEQUOIA:		
Giant sequoia (*Sequoia gigantea*)	IV	None to very light
	V	Light
Redwood (*S. sempervirens*)	XII	Medium
	XIII	Very light to medium

1/ Reported by technicians of the California Division of Forestry, the California Region of the U. S. Forest Service, and the Southern California Edison Company.

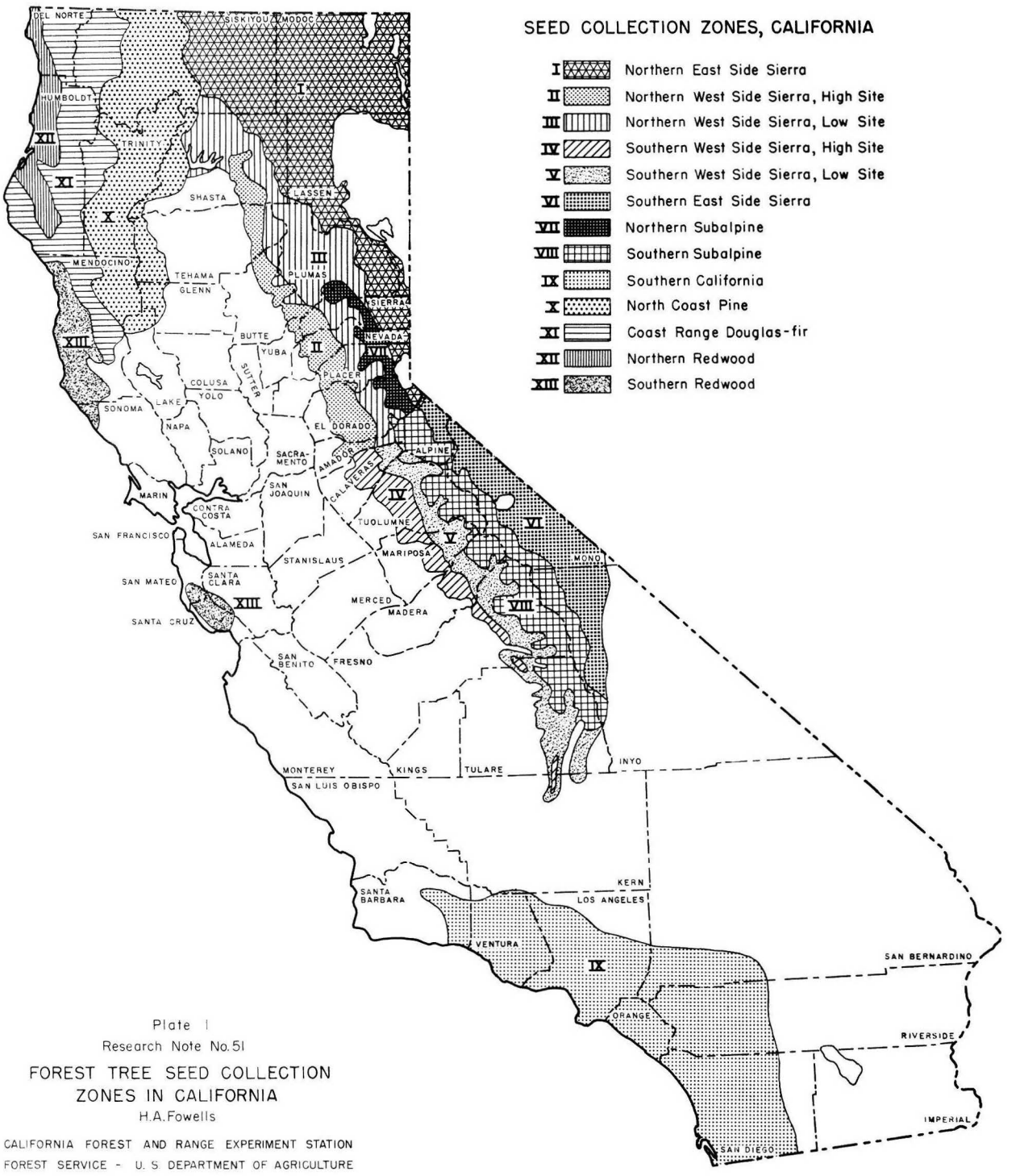

Plate 1

Research Note No. 51

FOREST TREE SEED COLLECTION ZONES IN CALIFORNIA

H.A. Fowells

CALIFORNIA FOREST AND RANGE EXPERIMENT STATION

FOREST SERVICE - U. S. DEPARTMENT OF AGRICULTURE

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